# Introduction

CppUnit? is a C++ unit testing module. It is a derivative of Java unit test module called JUnit. CppUnit? was originally written by Michael Feathers. The wikipedia description of unit testing is here.

Some advantage of CppUnit? over ad-hoc unit testing macros such as asserts are:

- Object oriented (most desired feature)
- Centered around unit testing as a concept
- Standard compiler-like text output
- Easy implementation and management (with Helper macros)
- Test registry to reduce recompilation needs

# Download

Download Cppunit 1.12 at here

Install Cppunit

```
1) cd cppunit-1.12.0
2) ./configure (if not working, try ./configure --disable-shared)
3) make
```

Try the `Money` example (http://cppunit.sourceforge.net/doc/1.11.6/money_example.html)

# Trouble shooting

in case you encounter the following error "fatal error - unable to remap..." when installing cppunit

To resolve it, do the following things in order:

```
1) Quit all cygwin processes
2) Start ash (<cygroot>\bin\ash.exe)
3) Execute /usr/bin/rebaseall
```

# Compilation

To compile a cpp unit problem (example.cpp), we need to compile it with the following commands:

```
g++ -g -O2 -c -o example.o example.cpp
```

Then compile the executable like this:

```
g++ -g -O2 -o example.exe example.o -ldl -lcppunit
```

# Run Tests (on cygwin)

Suppose we want to run the constraint engine test under cygwin. We should first enter the PLASMA directory:

```
cd $PLASMA_HOME/src/PLASMA
```

Then we run the following jam command:

```
jam -sLIBRARIES=STATIC -sOS=CYGWIN -sNOCYGWIN=TRUE run-ce-module-tests
```